REMARKS

Applicants appreciate the detailed examination evidenced by the Office Action mailed September 5, 2007 (hereinafter "Office Action"). In response, Applicants have amended independent Claims 9, 11, and 28, to further clarify the present claimed subject matter and have canceled Claim 7. Applicants respectfully submit that the claims are patentable for at least the reasons described herein.

Amended Independent Claim 9 Is Patentable Over Kasanuki et al.

Claim 9 stands rejected under 35 U.S.C. 102 over U.S. Patent No. 5,481,527 to Kasanuki et al. ("Kasanuki"). Office Action, page 4. Applicants acknowledge the Examiner's comments regarding previous counsel's arguments made in the Appeal Brief filed May 20, 2007. In particular, Applicants note the Examiner's observation that certain recitations argued in the Appeal Brief were not included in the claims. Accordingly, Applicants have amended independent Claim 9 to recite in part:

> a circuit configured to provide a constant voltage bias to the conductor probe as the conductor probe is dragged across multiple bits stored in the poled ferroelectric layer to perform block and bulk erasure operations,

which corresponds to the language highlighted by the Examiner found in paragraph 30 of Applicants' disclosure. However, Applicants respectfully maintain that Kasanuki does not disclose or suggest the amended recitations of independent Claim 9. Applicants note that Figure 13 of Kasanuki does not appear to show a constant bias voltage applied to the probe 1. To the contrary, the circuit shown in Figure 13 of Kasanuki actually shows an amplifier circuit 140 that detects current flowing from the probe 1 through the recording layer 134. The output of the amplifier circuit 140 is fed back to the driver circuit that drives the Z-axis linear actuator 137. The circuit shown in Figure 13 includes a pulse circuit that is used to apply a pulse voltage to perform recording, reproduction, and erasure between the probe electrode 1 and the electrode 133. However, this voltage appears to be a pulsed voltage, not a constant bias voltage applied during any movement in the X-Y direction. (See for example Kasanuki, Column 3- Line 35-58.) Accordingly, Applicants respectfully submit that amended independent Claim 9 is patentable over Kasanuki for at least this reason.

Amended Independent Claims 11 And 28 Are Patentable Over Cho

Claims 11 and 28 stand rejected under 35 U.S.C. 102 over U.S. Patent Publication No. 2004/0090903 by Cho et al. ("Cho"). Office Action, page 4. Applicants have amended independent Claim 11 to recite in part:

> a read circuit for using the probe to sense changes in capacitance or leakage current of the electrical junction between the semiconductor portion and the poled ferroelectric layer.

Amended independent Claim 28 includes similar recitations. Specifically, Cho does not disclose or suggest using the probe to sense changes in leakage current at the junction between the semiconductor portion and the ferroelectric layer. For example, Figure 1 of Cho shows that the probe 11 is used to determine the capacitance of the ferroelectric material 17, and does not measure leakage current at the junction of the electrode and substrate 15. In fact, Figure 1 of Cho does not even appear to show a junction between the ferroelectric material 17 and the substrate 15. To the contrary, the electrode 16 separates the ferroelectric material 17 from the substrate 15. Accordingly, probe 11 of Figure 1 of Cho does not appear capable of measuring a leakage current between these two layers as these two layers do not form a junction and the probe is configured to measure capacitance, not leakage current. Accordingly, independent Claims 11 and 28 are patentable over Cho for at least the reasons described herein.

CONCLUSION

Applicants have amended independent Claims 9, 11, and 28 to further distinguish those recitations from the cited references. Applicants have also provided remarks as to why the amended recitations are not disclosed by the cited references. Accordingly, Applicants respectfully request the withdrawal of all rejections, the allowance of all claims in due course. If any informal matters arise Applicants urge the Examiner to contact Applicants' undersigned representative at (919) 854-1400 to resolve any issues.

Respectfully submitted,

Robert N. Crouse
Registration No. 44,635

USPTO Customer No. 20792
Myers Bigel Sibley & Sajovec
Post Office Box 37428
Raleigh, North Carolina 27627
Telephone: 919/854-1400
Facsimile: 919/854-1401

CERTIFICATION OF TRANSMISSION

I hereby certify that this correspondence is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4) to the U.S. Patent and Trademark Office on November 29, 2007.

Kirsten S Carlos